

PATENT COOPERATION TREATY

RECEIVED

AUG 13 2001

PCT IS&S

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

TRIPOLI, Joseph, S.
THOMSON Multimedia Licensing Inc.
P.O. Box 5312
Princeton, NJ 08540
ETATS-UNIS D'AMERIQUE

JMF / JBH

**NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**
(PCT Rule 71.1)

Date of mailing
(day/month/year) 06.08.2001

Applicant's or agent's file reference
RCA 89615

IMPORTANT NOTIFICATION

International application No.
PCT/US00/16928

International filing date (day/month/year)
20/06/2000

Priority date (day/month/year)
13/07/1999

Applicant
THOMSON LICENSING S.A. et al.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

Name and mailing address of the IPEA/

 European Patent Office
D-80298 Munich
Tel. +49 89 2399 - 0 Tx: 523656 epmu d
Fax: +49 89 2399 - 4465

Authorized officer

Schalinatus, D

Tel. +49 89 2399-8242



PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference RCA 89615	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/US00/16928	International filing date (day/month/year) 20/06/2000	Priority date (day/month/year) 13/07/1999
International Patent Classification (IPC) or national classification and IPC H04N5/00		
Applicant THOMSON LICENSING S.A. et al.		



1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 4 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

 These annexes consist of a total of 6 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand 12/02/2001	Date of completion of this report 06.08.2001
Name and mailing address of the International preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer Guettlich, J Telephone No. +49 89 2399 2688 

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/US00/16928

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, pages:

1-13 as originally filed

Claims, No.:

1-21 as received on 09/07/2001 with letter of 05/07/2001

Drawings, sheets:

1/4-4/4 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/US00/16928

☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	1-21
	No:	Claims	
Inventive step (IS)	Yes:	Claims	1-21
	No:	Claims	
Industrial applicability (IA)	Yes:	Claims	1-21
	No:	Claims	

2. Citations and explanations
see separate sheet

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:
see separate sheet

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:
see separate sheet

Re Item V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

WO-A-97 46010 describes a system for the decoding of program specific information (PSI). The system uses different version numbers during playback from media.

Transport error indications and the discontinuity indicator in the packet header adaptation field are used to check on the validity of PSI.

WO-A-99 03268 discloses the use of the master guide table (MGT) being part of PSI to convert broadcaster channel brand numbers to RF channels.

EP-A-0 921 689 mentions the mixing of information from a common EPG with an individual one. A CPU checks the PSI version number to perform an update of stored tables.

The claims 1, 9, 13, 17 and 19 are considered novel and involve inventive step, because none of the cited prior art documents discloses or suggests a PSI version number mismatch detection with related counteractions. The dependent claims add further features to the related independent claims and thus relate to novel and inventive subject-matter.

The claimed invention is considered industrially applicable in the field of digital video signal decoders (Art.33(4) PCT).

Re Item VII

Certain defects in the international application

The features of the claims are not provided with reference signs placed in parentheses (Rule 6.2(b) PCT).

Re Item VIII

Certain observations on the international application

The term 'applying program specific information' used in claim 9 is not clear (Art.6 PCT).

In the light of the description and the formulation used in claim 1 the reader may guess that the applicants intend to express that despite of a version number mismatch the system for decoding packetised program information actually decodes and uses the sent program information for display.

5

CLAIMS

1. In a system for decoding packetized program information including ancillary program specific information comprising a plurality of hierarchically ordered information tables, said ancillary information being for use in acquiring and
10 decoding packetized program information to provide a video program for display, a method comprising the steps of:

detecting a mismatch between a version number of a first table of said program specific information and a corresponding version number of said first table conveyed in a second table;

15 forcing compatibility of said first table version number conveyed in said first and second tables in response to said detected mismatch; and

decoding packetized program information using program specific information including said first and second tables including said forced compatible version number to provide a video program for display.

20

2. A method according to claim 1, wherein

said first table comprises a channel map associating a transmission channel carrier frequency with data identifiers used to capture datastreams constituting a program conveyed on a broadcast channel, and

25 said second table contains information for acquiring program specific information conveyed in other tables including identifiers for identifying data packets comprising said first table.

3. A method according to claim 1, including the step of

30 examining said program specific information for error indications by examining at least one of, (a) an MPEG transport error indicator, (b) an MPEG discontinuity indicator, (c) an MPEG continuity counter, and

decoding said packetized program information in response to said examination determination of an error free condition.

35

5 4. A method according to claim 1, wherein
 said second table conveys a plurality of version numbers
corresponding to version numbers conveyed in said plurality of hierarchically ordered
information tables, and said detecting step includes the step of,
 comparing individual version numbers of said plurality of
10 hierarchically ordered information tables against corresponding individual version
numbers conveyed in said second table.

 5. A method according to claim 1, wherein
 said step of ensuring compatibility of said first table version number
15 conveyed in said first and second tables includes the step of,
 substituting a version number for said first table version number
conveyed in at least one of (a) said first table, and (b) said second table, to ensure
compatibility.

20 6. A method according to claim 5, wherein
 said substituting step comprises overwriting said first table version
number conveyed in at least one of (a) said first table, and (b) said second table, to
ensure compatibility.

25 7. A method according to claim 1, wherein
 said step of ensuring compatibility of said first table version number
conveyed in said first and second tables includes the step of,
 reverting to a previous version of at least one of (a) said first table, and
(b) said second table, to ensure version number compatibility.

30 8. A method according to claim 1, wherein
 said step of ensuring compatibility of said first table version number
conveyed in said first and second tables includes the step of,
 initiating acquisition of at least one of (a) a new version of said first
35 table, and (b) a new version of said second table, to ensure version number
compatibility.

5 9. In a system for decoding packetized program information including ancillary program specific information comprising a plurality of hierarchically ordered information tables, said ancillary information being for use in acquiring and decoding packetized program information to provide a video program for display, a method comprising the steps of:

10 detecting a mismatch between a version number of a first table of said program specific information and a corresponding version number of said first table conveyed in a second table;

 decoding packetized program information by,
 disregarding said first table version number conveyed in said
15 first and second tables in response to said detected mismatch and by
 applying program specific information including information in said first table.

 10. A method according to claim 9, including the step of,
20 examining said program specific information for an error condition
and decoding said packetized program information in response to the absence of an error condition.

 11. A method according to claim 10, wherein
25 said error condition is indicated by at least one of, (a) an MPEG transport error indicator, (b) an MPEG discontinuity indicator, (c) an MPEG continuity counter.

 12. A method according to claim 9, wherein
30 said second table conveys a plurality of version numbers corresponding to version numbers conveyed in said plurality of hierarchically ordered information tables, and said detecting step includes the step of,
 comparing individual version numbers of said plurality of hierarchically ordered information tables against corresponding individual version
35 numbers conveyed in said second table.

- 5 13. In a system for decoding packetized program information including ancillary program specific information comprising a plurality of hierarchically ordered information tables, said ancillary information being for use in acquiring and decoding packetized program information to provide a video program for display, a method comprising the steps of:
- 10 detecting a mismatch between a version number of a first table of said program specific information and a corresponding version number of said first table conveyed in a second table;
- re-acquiring a first table of said program specific information in response to said detected mismatch;
- 15 examining said re-acquired first table and said second table for a mismatch of said first table version number; and
- inhibiting decoding packetized program information in response to said detected mismatch between said re-acquired first table and said second table.
- 20 14. A method according to claim 13, wherein
- said first table comprises a channel map associating a transmission channel carrier frequency with data identifiers used to capture datastreams constituting a program conveyed on a broadcast channel.
- 25 15. A method according to claim 14, including the step of
- indicating in a database said transmission channel is associated with said detected mismatch between said re-acquired first table and said second table.
16. A method according to claim 13, wherein
- 30 said second table contains information for acquiring program specific information conveyed in other tables including identifiers for identifying data packets comprising said first table.

5 17. In a system for decoding packetized program information including ancillary program specific information comprising a plurality of hierarchically ordered information tables, said ancillary information being for use in acquiring and decoding packetized program information to provide a video program for display, a method comprising the steps of:

10 detecting a mismatch between a version number of a first program specific information table comprising a channel map associating a transmission channel carrier frequency with data identifiers used to capture datastreams constituting a program conveyed on a broadcast channel and a corresponding version number of said first program specific information table conveyed in a second program
15 specific information table;

 indicating in a database said transmission channel is associated with said detected mismatch between said first table and said second table; and

 inhibiting decoding packetized program information in response to said detected mismatch between said re-acquired first table and said second table.

20

 18. A method according to claim 17, wherein

 said second table contains information for acquiring program specific information conveyed in other tables including identifiers for identifying data packets comprising said first table.

25

- 5 19. In a system for decoding packetized program information including ancillary program specific information comprising a plurality of hierarchically ordered information tables, said ancillary information being for use in acquiring and decoding packetized program information to provide a video program for display, a method comprising the steps of:
- 10 detecting a fault condition in program specific information comprising at least one of, (a) a version number incompatibility between a version number of a first table and a corresponding version number of said first table conveyed in a second table, and (b) a PSI error condition;
- indicating in a database said transmission channel is associated with
- 15 said detected fault condition; and
- removing a channel associated with said fault condition from a User's viewable active channel line-up list.
19. A method according to claim 18, wherein
- 20 said PSI error condition comprises at least one of, (a) an MPEG transport error, (b) an MPEG discontinuity error, (c) an MPEG continuity count error, and (d) an error indicated by a variance between successive time stamps.
20. A method according to claim 18, including the step of
- 25 indicating a channel as being associated with a fault condition in a User's viewable channel line-up list.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 00/16928

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H04N5/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H04N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EP0-Internal, WPI Data, PAJ, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 97 46010 A (THOMSON CONSUMER ELECTRONICS) 4 December 1997 (1997-12-04) page 3, line 20 -page 4, line 2 claim 6 -----	1-20
A	WO 99 03268 A (THOMSON CONSUMER ELECTRONICS) 21 January 1999 (1999-01-21) page 6, line 17 -page 6, line 33 figures 2-5 -----	1, 9, 13, 17
A	EP 0 921 689 A (MATSUSHITA ELECTRIC IND CO LTD) 9 June 1999 (1999-06-09) column 34, line 17 -column 34, line 35 column 36, line 42 -column 37, line 5 -----	1, 9, 13, 17

☐ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

5 October 2000

Date of mailing of the international search report

12/10/2000

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Hampson, F

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 00/16928

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9746010	A	04-12-1997	US 5844595 A 01-12-1998
			AU 3150797 A 05-01-1998
			AU 3150897 A 05-01-1998
			AU 3209497 A 05-01-1998
			AU 716349 B 24-02-2000
			AU 3213297 A 05-01-1998
			AU 3213397 A 05-01-1998
			BR 9709409 A 10-08-1999
			BR 9709410 A 10-08-1999
			BR 9709420 A 10-08-1999
			BR 9709494 A 10-08-1999
			BR 9709508 A 10-08-1999
			CN 1226354 A 18-08-1999
			CN 1226359 A 18-08-1999
			CN 1226355 A 18-08-1999
			CN 1226356 A 18-08-1999
			CN 1226357 A 18-08-1999
			EP 0903033 A 24-03-1999
			EP 0903034 A 24-03-1999
			EP 0903035 A 24-03-1999
			EP 0903036 A 24-03-1999
			EP 0903038 A 24-03-1999
			PL 330219 A 10-05-1999
			WO 9746007 A 04-12-1997
			WO 9746008 A 04-12-1997
			WO 9746017 A 04-12-1997
			WO 9746009 A 04-12-1997
			US 5838873 A 17-11-1998
			US 5844478 A 01-12-1998
			US 5754651 A 19-05-1998
			US 5933500 A 03-08-1999
WO 9903268	A	21-01-1999	US 6115074 A 05-09-2000
			AU 8176298 A 08-02-1999
			AU 8272998 A 08-02-1999
			AU 8377798 A 08-02-1999
			AU 8475298 A 08-02-1999
			CN 1262837 T 09-08-2000
			CN 1262838 T 09-08-2000
			CN 1262839 T 09-08-2000
			CN 1262840 T 09-08-2000
			EP 0995309 A 26-04-2000
			EP 1013081 A 28-06-2000
			EP 0997036 A 03-05-2000
			EP 0997037 A 03-05-2000
			US 6111611 A 29-08-2000
			US 6111612 A 29-08-2000
			WO 9903266 A 21-01-1999
			WO 9903267 A 21-01-1999
			WO 9903269 A 21-01-1999
EP 0921689	A	09-06-1999	JP 11168666 A 22-06-1999
			AU 706965 A 01-07-1999

REC'D 08 AUG 2001

WIPO

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)



Applicant's or agent's file reference RCA.89615	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/US00/16928	International filing date (day/month/year) 20/06/2000	Priority date (day/month/year) 13/07/1999
International Patent Classification (IPC) or national classification and IPC H04N5/00		
Applicant THOMSON LICENSING S.A. et al.		

- This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 4 sheets, including this cover sheet.
 - ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 6 sheets.

- This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand 12/02/2001	Date of completion of this report 06.08.2001
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 eprmu d Fax: +49 89 2399 - 4465	Authorized officer Guettlich, J Telephone No. +49 89 2399 2688 

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/US00/16928

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, pages:

1-13 as originally filed

Claims, No.:

1-21 as received on 09/07/2001 with letter of 05/07/2001

Drawings, sheets:

1/4-4/4 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/US00/16928

☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims 1-21
	No: Claims
Inventive step (IS)	Yes: Claims 1-21
	No: Claims
Industrial applicability (IA)	Yes: Claims 1-21
	No: Claims

2. Citations and explanations
see separate sheet

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:
see separate sheet

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:
see separate sheet

Re Item V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

WO-A-97 46010 describes a system for the decoding of program specific information (PSI). The system uses different version numbers during playback from media.

Transport error indications and the discontinuity indicator in the packet header adaptation field are used to check on the validity of PSI.

WO-A-99 03268 discloses the use of the master guide table (MGT) being part of PSI to convert broadcaster channel brand numbers to RF channels.

EP-A-0 921 689 mentions the mixing of information from a common EPG with an individual one. A CPU checks the PSI version number to perform an update of stored tables.

The claims 1, 9, 13, 17 and 19 are considered novel and involve inventive step, because none of the cited prior art documents discloses or suggests a PSI version number mismatch detection with related counteractions. The dependent claims add further features to the related independent claims and thus relate to novel and inventive subject-matter.

The claimed invention is considered industrially applicable in the field of digital video signal decoders (Art.33(4) PCT).

Re Item VII

Certain defects in the international application

The features of the claims are not provided with reference signs placed in parentheses (Rule 6.2(b) PCT).

Re Item VIII

Certain observations on the international application

The term 'applying program specific information' used in claim 9 is not clear (Art.6 PCT).

In the light of the description and the formulation used in claim 1 the reader may guess that the applicants intend to express that despite of a version number mismatch the system for decoding packetised program information actually decodes and uses the sent program information for display.

14

CLAIMS

1. In a system for decoding packetized program information including ancillary program specific information comprising a plurality of hierarchically ordered information tables, said ancillary information being for use in acquiring and decoding packetized program information to provide a video program for display, a method comprising the steps of:

5 detecting a mismatch between a version number of a first table of said program specific information and a corresponding version number of said first table conveyed in a second table;

10 ensuring compatibility of said first table version number conveyed in said first and second tables in response to said detected mismatch; and

decoding packetized program information using program specific information including said first and second tables including said forced compatible version number to provide a video program for display.

2. A method according to claim 1, wherein

20 said first table comprises a channel map associating a transmission channel carrier frequency with data identifiers used to capture datastreams constituting a program conveyed on a broadcast channel, and

said second table contains information for acquiring program specific information conveyed in other tables including identifiers for identifying data packets comprising said first table.

25 3. A method according to claim 1, including the step of

examining said program specific information for error indications by examining at least one of, (a) an MPEG transport error indicator, (b) an MPEG discontinuity indicator, (c) an MPEG continuity counter, and

30 decoding said packetized program information in response to said examination determination of an error free condition.

15

4. A method according to claim 1, wherein
said second table conveys a plurality of version numbers corresponding to
version numbers conveyed in said plurality of hierarchically ordered information tables,
and said detecting step includes the step of,

5 comparing individual version numbers of said plurality of hierarchically
ordered information tables against corresponding individual version numbers conveyed in
said second table.

10 5. A method according to claim 1, wherein
said step of ensuring compatibility of said first table version number
conveyed in said first and second tables includes the step of,
substituting a version number for said first table version number conveyed
in at least one of (a) said first table, and (b) said second table, to ensure compatibility.

15 6. A method according to claim 5, wherein
said substituting step comprises overwriting said first table version
number conveyed in at least one of (a) said first table, and (b) said second table, to ensure
compatibility.

20 7. A method according to claim 1, wherein
said step of ensuring compatibility of said first table version number
conveyed in said first and second tables includes the step of,
reverting to a previous version of at least one of (a) said first table, and (b)
said second table, to ensure version number compatibility.

25 8. A method according to claim 1, wherein
said step of ensuring compatibility of said first table version number
conveyed in said first and second tables includes the step of,
initiating acquisition of at least one of (a) a new version of said first table,
30 and (b) a new version of said second table, to ensure version number compatibility.

11 09 07 01

16

9. In a system for decoding packetized program information including ancillary program specific information comprising a plurality of hierarchically ordered information tables, said ancillary information being for use in acquiring and decoding packetized program information to provide a video program for display, a method comprising the steps of:

detecting a mismatch between a version number of a first table of said program specific information and a corresponding version number of said first table conveyed in a second table;

decoding packetized program information by,
disregarding said first table version number conveyed in said first and second tables in response to said detected mismatch and by
applying program specific information including information in said first table.

10. A method according to claim 9, including the step of,
examining said program specific information for an error condition and
decoding said packetized program information in response to the absence of an error condition.

11. A method according to claim 10, wherein
said error condition is indicated by at least one of, (a) an MPEG transport error indicator, (b) an MPEG discontinuity indicator, (c) an MPEG continuity counter.

12. A method according to claim 9, wherein
said second table conveys a plurality of version numbers corresponding to version numbers conveyed in said plurality of hierarchically ordered information tables, and said detecting step includes the step of,

comparing individual version numbers of said plurality of hierarchically ordered information tables against corresponding individual version numbers conveyed in said second table.

17

13. In a system for decoding packetized program information including ancillary program specific information comprising a plurality of hierarchically ordered information tables, said ancillary information being for use in acquiring and decoding packetized program information to provide a video program for display, a method comprising the steps of:

detecting a mismatch between a version number of a first table of said program specific information and a corresponding version number of said first table conveyed in a second table;

re-acquiring a first table of said program specific information in response to said detected mismatch;

examining said re-acquired first table and said second table for a mismatch of said first table version number; and

inhibiting decoding packetized program information in response to said detected mismatch between said re-acquired first table and said second table.

14. A method according to claim 13, wherein

said first table comprises a channel map associating a transmission channel carrier frequency with data identifiers used to capture datastreams constituting a program conveyed on a broadcast channel.

15. A method according to claim 14, including the step of

indicating in a database said transmission channel is associated with said detected mismatch between said re-acquired first table and said second table.

16. A method according to claim 13, wherein

said second table contains information for acquiring program specific information conveyed in other tables including identifiers for identifying data packets comprising said first table.

09-07-01

18

17. In a system for decoding packetized program information including ancillary program specific information comprising a plurality of hierarchically ordered information tables, said ancillary information being for use in acquiring and decoding packetized program information to provide a video program for display, a method comprising the steps of:

detecting a mismatch between a version number of a first program specific information table comprising a channel map associating a transmission channel carrier frequency with data identifiers used to capture datastreams constituting a program conveyed on a broadcast channel and a corresponding version number of said first program specific information table conveyed in a second program specific information table;

indicating in a database said transmission channel is associated with said detected mismatch between said first table and said second table; and

inhibiting decoding packetized program information in response to said detected mismatch between said re-acquired first table and said second table.

18. A method according to claim 17, wherein

said second table contains information for acquiring program specific information conveyed in other tables including identifiers for identifying data packets comprising said first table.

19

19. In a system for decoding packetized program information including ancillary program specific information comprising a plurality of hierarchically ordered information tables, said ancillary information being for use in acquiring and decoding packetized program information to provide a video program for display, a method comprising the steps of:

detecting a fault condition in program specific information comprising at least one of, (a) a version number incompatibility between a version number of a first table and a corresponding version number of said first table conveyed in a second table, and (b) a PSI error condition;

indicating in a database said transmission channel is associated with said detected fault condition; and

removing a channel associated with said fault condition from a User's viewable active channel line-up list.

20. A method according to claim 19, wherein said PSI error condition comprises at least one of, (a) an MPEG transport error, (b) an MPEG discontinuity error, (c) an MPEG continuity count error, and (d) an error indicated by a variance between successive time stamps.

21. A method according to claim 19, including the step of indicating a channel as being associated with a fault condition in a User's viewable channel line-up list.

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference RCA 89615	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/US 00/ 16928	International filing date (day/month/year) 20/06/2000	(Earliest) Priority Date (day/month/year) 13/07/1999
Applicant THOMSON LICENSING S.A.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 2 sheets.



It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.



the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :



contained in the international application in written form.



filed together with the international application in computer readable form.



furnished subsequently to this Authority in written form.



furnished subsequently to this Authority in computer readable form.



the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.



the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

the text is approved as submitted by the applicant.



the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

the text is approved as submitted by the applicant.



the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

as suggested by the applicant.



because the applicant failed to suggest a figure.



because this figure better characterizes the invention.

3



None of the figures.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/ 00/16928

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H04N5/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H04N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 97 46010 A (THOMSON CONSUMER ELECTRONICS) 4 December 1997 (1997-12-04) page 3, line 20 -page 4, line 2 claim 6	1-20
A	WO 99 03268 A (THOMSON CONSUMER ELECTRONICS) 21 January 1999 (1999-01-21) page 6, line 17 -page 6, line 33 figures 2-5	1,9,13, 17
A	EP 0 921 689 A (MATSUSHITA ELECTRIC IND CO LTD) 9 June 1999 (1999-06-09) column 34, line 17 -column 34, line 35 column 36, line 42 -column 37, line 5	1,9,13, 17

☐ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

5 October 2000

Date of mailing of the international search report

12/10/2000

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3018

Authorized officer

Hampson, F

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/00/16928

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9746010	A	04-12-1997	US 5844595 A	01-12-1998
			AU 3150797 A	05-01-1998
			AU 3150897 A	05-01-1998
			AU 3209497 A	05-01-1998
			AU 716349 B	24-02-2000
			AU 3213297 A	05-01-1998
			AU 3213397 A	05-01-1998
			BR 9709409 A	10-08-1999
			BR 9709410 A	10-08-1999
			BR 9709420 A	10-08-1999
			BR 9709494 A	10-08-1999
			BR 9709508 A	10-08-1999
			CN 1226354 A	18-08-1999
			CN 1226359 A	18-08-1999
			CN 1226355 A	18-08-1999
			CN 1226356 A	18-08-1999
			CN 1226357 A	18-08-1999
			EP 0903033 A	24-03-1999
			EP 0903034 A	24-03-1999
			EP 0903035 A	24-03-1999
			EP 0903036 A	24-03-1999
			EP 0903038 A	24-03-1999
			PL 330219 A	10-05-1999
			WO 9746007 A	04-12-1997
			WO 9746008 A	04-12-1997
			WO 9746017 A	04-12-1997
			WO 9746009 A	04-12-1997
			US 5838873 A	17-11-1998
			US 5844478 A	01-12-1998
			US 5754651 A	19-05-1998
			US 5933500 A	03-08-1999
WO 9903268	A	21-01-1999	US 6115074 A	05-09-2000
			AU 8176298 A	08-02-1999
			AU 8272998 A	08-02-1999
			AU 8377798 A	08-02-1999
			AU 8475298 A	08-02-1999
			CN 1262837 T	09-08-2000
			CN 1262838 T	09-08-2000
			CN 1262839 T	09-08-2000
			CN 1262840 T	09-08-2000
			EP 0995309 A	26-04-2000
			EP 1013081 A	28-06-2000
			EP 0997036 A	03-05-2000
			EP 0997037 A	03-05-2000
			US 6111611 A	29-08-2000
			US 6111612 A	29-08-2000
			WO 9903266 A	21-01-1999
			WO 9903267 A	21-01-1999
			WO 9903269 A	21-01-1999
EP 0921689	A	09-06-1999	JP 11168666 A	22-06-1999
			AU 706965 A	01-07-1999

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference RCA 89615	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/US 00/ 16928	International filing date (day/month/year) 20/06/2000	(Earliest) Priority Date (day/month/year) 13/07/1999
Applicant THOMSON LICENSING S.A.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 2 sheets.



It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.



the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :



contained in the international application in written form.



filed together with the international application in computer readable form.



furnished subsequently to this Authority in written form.



furnished subsequently to this Authority in computer readable form.



the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.



the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,



the text is approved as submitted by the applicant.



the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,



the text is approved as submitted by the applicant.



the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.



as suggested by the applicant.



because the applicant failed to suggest a figure.



because this figure better characterizes the invention.

3



None of the figures.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 00/16928

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 H04N5/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H04N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 97 46010 A (THOMSON CONSUMER ELECTRONICS) 4 December 1997 (1997-12-04) page 3, line 20 -page 4, line 2 claim 6 ----	1-20
A	WO 99 03268 A (THOMSON CONSUMER ELECTRONICS) 21 January 1999 (1999-01-21) page 6, line 17 -page 6, line 33 figures 2-5 ----	1,9,13, 17
A	EP 0 921 689 A (MATSUSHITA ELECTRIC IND CO LTD) 9 June 1999 (1999-06-09) column 34, line 17 -column 34, line 35 column 36, line 42 -column 37, line 5 -----	1,9,13, 17



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

5 October 2000

Date of mailing of the international search report

12/10/2000

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
 NL - 2280 HV Rijswijk
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
 Fax: (+31-70) 340-3016

Authorized officer

Hampson, F

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 00/16928

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9746010	A	04-12-1997	US 5844595 A	01-12-1998
			AU 3150797 A	05-01-1998
			AU 3150897 A	05-01-1998
			AU 3209497 A	05-01-1998
			AU 716349 B	24-02-2000
			AU 3213297 A	05-01-1998
			AU 3213397 A	05-01-1998
			BR 9709409 A	10-08-1999
			BR 9709410 A	10-08-1999
			BR 9709420 A	10-08-1999
			BR 9709494 A	10-08-1999
			BR 9709508 A	10-08-1999
			CN 1226354 A	18-08-1999
			CN 1226359 A	18-08-1999
			CN 1226355 A	18-08-1999
			CN 1226356 A	18-08-1999
			CN 1226357 A	18-08-1999
			EP 0903033 A	24-03-1999
			EP 0903034 A	24-03-1999
			EP 0903035 A	24-03-1999
			EP 0903036 A	24-03-1999
			EP 0903038 A	24-03-1999
			PL 330219 A	10-05-1999
			WO 9746007 A	04-12-1997
			WO 9746008 A	04-12-1997
			WO 9746017 A	04-12-1997
			WO 9746009 A	04-12-1997
			US 5838873 A	17-11-1998
			US 5844478 A	01-12-1998
			US 5754651 A	19-05-1998
			US 5933500 A	03-08-1999
WO 9903268	A	21-01-1999	US 6115074 A	05-09-2000
			AU 8176298 A	08-02-1999
			AU 8272998 A	08-02-1999
			AU 8377798 A	08-02-1999
			AU 8475298 A	08-02-1999
			CN 1262837 T	09-08-2000
			CN 1262838 T	09-08-2000
			CN 1262839 T	09-08-2000
			CN 1262840 T	09-08-2000
			EP 0995309 A	26-04-2000
			EP 1013081 A	28-06-2000
			EP 0997036 A	03-05-2000
			EP 0997037 A	03-05-2000
			US 6111611 A	29-08-2000
EP 0921689	A	09-06-1999	US 6111612 A	29-08-2000
			WO 9903266 A	21-01-1999
			WO 9903267 A	21-01-1999
			WO 9903269 A	21-01-1999
			JP 11168666 A	22-06-1999
			AU 706965 A	01-07-1999

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
18 January 2001 (18.01.2001)

PCT

(10) International Publication Number
WO 01/05157 A2

(51) International Patent Classification⁷: H04N 7/24

(21) International Application Number: PCT/US00/16928

(22) International Filing Date: 20 June 2000 (20.06.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/143,611 13 July 1999 (13.07.1999) US

(71) Applicant (for all designated States except US): THOMSON LICENSING S.A. [FR/FR]; 46, quai Alphonse Le Gallo, F-92648 Boulogne Cedex (FR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): KLOPFENSTEIN,

Scott, Edward [US/US]; 9304-F Viking Hills Court, Indianapolis, IN 46250 (US). SCHNEIDEWEND, Daniel, Richard [US/US]; 11221 Tall Trees Drive, Fishers, IN 46038 (US).

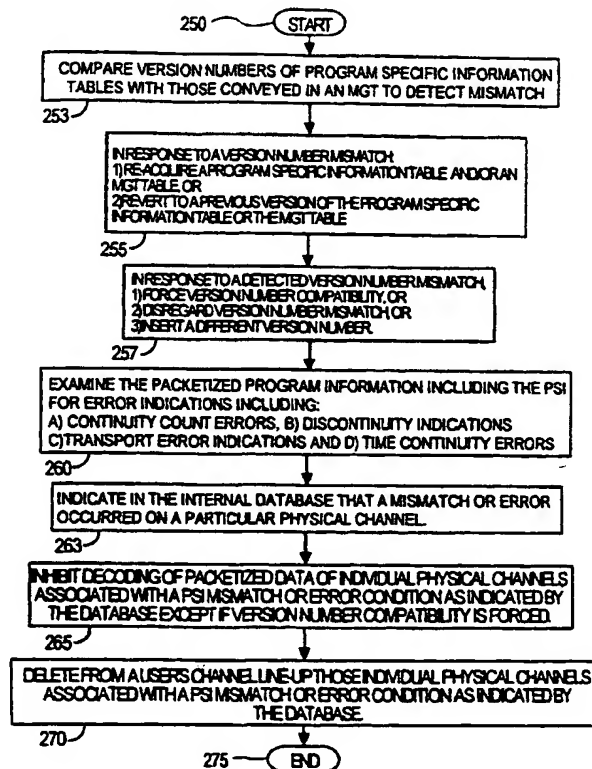
(74) Agents: TRIPOLI, Joseph, S. et al.: THOMSON Multimedia Licensing Inc., P.O. Box 5312, Princeton, NJ 08540 (US).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian

[Continued on next page]

(54) Title: SYSTEM FOR PROGRAM SPECIFIC INFORMATION ERROR MANAGEMENT IN A VIDEO DECODER



[Continued on next page]

WO 01/05157 A2

WO 01/05157 A2

patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

- *Without international search report and to be republished upon receipt of that report.*

(57) Abstract: A processing system decodes packetized program information including ancillary program specific information comprising a plurality of hierarchically ordered information tables. The ancillary information is used in acquiring and decoding packetized program information to provide a video program for display. The processing system employs a method involving detection of a mismatch between a version number of a first table of the program specific information (e.g. a virtual channel table (VCT), or channel information table (CIT)) and a corresponding version number of the first table conveyed in a second table (e.g. a master guide table (MGT)). If a mismatch is detected, the first and second tables are forced to contain a compatible first table version number. The packetized program information is decoded to provide a video program for display using the program specific information including the first and second tables including the forced compatible version number. A detected mismatch may also be disregarded to enable the decoding of the packetized program information and a User's channel line-up may be edited to remove channels associated with a detected mismatch or other program specific information error condition.

(19) World Intellectual Property Organization
International Bureau(43) International Publication Date
18 January 2001 (18.01.2001)

PCT

(10) International Publication Number
WO 01/005157 A3(51) International Patent Classification⁷: H04N 5/00

(21) International Application Number: PCT/US00/16928

(22) International Filing Date: 20 June 2000 (20.06.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/143,611 13 July 1999 (13.07.1999) US

(71) Applicant (for all designated States except US): THOMSON LICENSING S.A. [FR/FR]; 46, quai Alphonse Le Gallo, F-92648 Boulogne Cedex (FR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): KLOPFENSTEIN, Scott, Edward [US/US]; 9304-F Viking Hills Court, Indianapolis, IN 46250 (US). SCHNEIDEWEND, Daniel,

Richard [US/US]; 11221 Tall Trees Drive, Fishers, IN 46038 (US).

(74) Agents: TRIPOLI, Joseph, S. et al.; THOMSON Multimedia Licensing Inc., P.O. Box 5312, Princeton, NJ 08540 (US).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

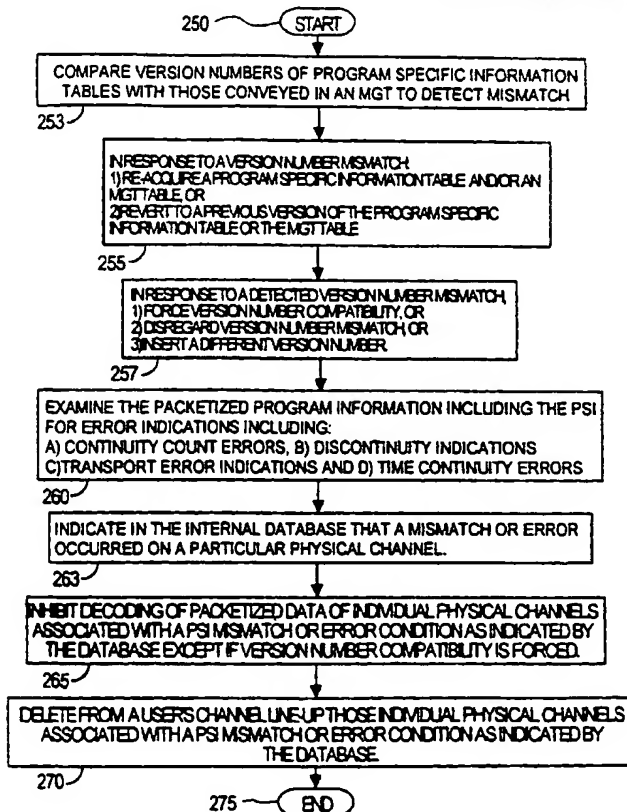
(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

RECEIVED

[Continued on next page]

(54) Title: SYSTEM FOR PROGRAM SPECIFIC INFORMATION ERROR MANAGEMENT IN A VIDEO DECODER

Technology Center 2600



(57) Abstract: A processing system decodes packetized program information including ancillary program specific information comprising a plurality of hierarchically ordered information tables. The ancillary information is used in acquiring and decoding packetized program information to provide a video program for display. The processing system employs a method involving detection of a mismatch between a version number of a first table of the program specific information (e.g. a virtual channel table (VCT), or channel information table (CIT)) and a corresponding version number of the first table conveyed in a second table (e.g. a master guide table (MGT)). If a mismatch is detected, the first and second tables are forced to contain a compatible first table version number. The packetized program information is decoded to provide a video program for display using the program specific information including the first and second tables including the forced compatible version number. A detected mismatch may also be disregarded to enable the decoding of the packetized program information and a User's channel line-up may be edited to remove channels associated with a detected mismatch or other program specific information error condition.

WO 01/005157 A3



Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(88) Date of publication of the international search report:

12 September 2002

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 00/16928

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H04N5/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H04N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 97 46010 A (THOMSON CONSUMER ELECTRONICS) 4 December 1997 (1997-12-04) page 3, line 20 -page 4, line 2 claim 6	1-20
A	WO 99 03268 A (THOMSON CONSUMER ELECTRONICS) 21 January 1999 (1999-01-21) page 6, line 17 -page 6, line 33 figures 2-5	1,9,13, 17
A	EP 0 921 689 A (MATSUSHITA ELECTRIC IND CO LTD) 9 June 1999 (1999-06-09) column 34, line 17 -column 34, line 35 column 36, line 42 -column 37, line 5	1,9,13, 17

☐ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubt on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"Z" document member of the same patent family

Date of the actual completion of the international search

5 October 2000

Date of mailing of the international search report

12/10/2000

Name and mailing address of the ISA

European Patent Office, P.O. 6010 Patentplan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 opo nl,
Fax: (+31-70) 340-3010

Authorized officer

Hampson, F

INTERNATIONAL SEARCH REPORT
information on patent family members

International Application No

PCT/US 00/16928

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9746010 A	04-12-1997	US 5844595 A	01-12-1998
		AU 3150797 A	05-01-1998
		AU 3150897 A	05-01-1998
		AU 3209497 A	05-01-1998
		AU 716349 B	24-02-2000
		AU 3213297 A	05-01-1998
		AU 3213397 A	05-01-1998
		BR 9709409 A	10-08-1999
		BR 9709410 A	10-08-1999
		BR 9709420 A	10-08-1999
		BR 9709494 A	10-08-1999
		BR 9709508 A	10-08-1999
		CN 1226354 A	18-08-1999
		CN 1226359 A	18-08-1999
		CN 1226355 A	18-08-1999
		CN 1226356 A	18-08-1999
		CN 1226357 A	18-08-1999
		EP 0903033 A	24-03-1999
		EP 0903034 A	24-03-1999
		EP 0903035 A	24-03-1999
		EP 0903036 A	24-03-1999
		EP 0903038 A	24-03-1999
		PL 330219 A	10-05-1999
		WO 9746007 A	04-12-1997
		WO 9746008 A	04-12-1997
		WO 9746017 A	04-12-1997
		WO 9746009 A	04-12-1997
		US 5838873 A	17-11-1998
		US 5844478 A	01-12-1998
		US 5754651 A	19-05-1998
		US 5933500 A	03-08-1999
WO 9903268 A	21-01-1999	US 6115074 A	05-09-2000
		AU 8176298 A	08-02-1999
		AU 8272998 A	08-02-1999
		AU 8377798 A	08-02-1999
		AU 8475298 A	08-02-1999
		CN 1262837 T	09-08-2000
		CN 1262838 T	09-08-2000
		CN 1262839 T	09-08-2000
		CN 1262840 T	09-08-2000
		EP 0995309 A	26-04-2000
		EP 1013081 A	28-06-2000
		EP 0997036 A	03-05-2000
		EP 0997037 A	03-05-2000
		US 6111611 A	29-08-2000
		US 6111612 A	29-08-2000
		WO 9903266 A	21-01-1999
EP 0921689 A	09-06-1999	WO 9903267 A	21-01-1999
		WO 9903269 A	21-01-1999
		JP 11168666 A	22-06-1999
		AU 706965 A	01-07-1999